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A popular monthly review and record for the Pacific Coast.

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CONTENTS:

Sea-urchins of the Pacific coast.	73
Review of the Cactaceæ of the United States.—V.	57
Queries and Answers.	72
Author's Catalog.	71
West American Mollusca.—III.	74
Editorial.	70
Notes and News.	70

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THE
West American Scientist

Volume XI. No. 7. August, 1900. Whole No. 92.

SEA-URCHINS OF THE PACIFIC COAST.

These beautiful animals seem to have received slight attention, as the following is about all the information that I find.

I—Regular sea-urchins.

ARBACIA NIGRA, credited to west coast.

A. STELLATA Gray, collected at San Juan, in the Gulf of California, by the writer, No. 1772 (1899).

ASTROPYGA PULVINATA, credited to Lower California and Central America, described as having flesh-colored spines.

DIADEMA MEXICANUS A. Ag. San Diego, south.

HIPPONOE DEPRESSA, San Diego, Gulf of Cal.

STRONGYLOCENTROTUS FRANCISCANUS occurs at San Diego, south; often a foot in diameter, including spines.

S. MEXICANUS of the Gulf of California I have not seen.

S. PURPURASCENS is the common San Diego purple urchin.

II—Cake-urchins.

CLYPEASTER ROTUNDAS, San Diego, south.

ECHINARACHNIUS EXCENTRICUS Val.

This common species is abundant from Oregon to Mexico; a form from Santo Domingo, Lower California (Orcutt No. 2552) is quite different from the 'sand dollars' of San Diego, and we are inclined to consider it distinct.

ENCOPE CALIFORNICA Verrill.

Orcutt No. 2551: Santo Domingo, Lower California.

E. GRANDIS, Gulf of California.

III—Irregular sea-urchins.

AGASSIZIA SCROBICULATA, western Mexico.

BRISSUS OBESUS Verrill. Gulf of Cal.—Orcutt.

LOVENIA CORDIFORMIS, Pt. Conception to Mexico.

RHYNCOPYGUS PACIFICUS, western Mexico.

We will be pleased to learn of any additions that can be made to this short list.

C. R. ORCUTT.

WEST AMERICAN MOLLUSCA.—IV.

SHELLS OF LAGOON HEAD.

The following list is the result of two or three days spent in the latter part of February, 1899, mostly spent in botanizing. No rocky beach was visited, all the living shells being collected in the lagoon, nearly due east of Cedrus Island, the landing being known locally as Santo Domingo. It is near the 28th degree north lat. on the west coast of Baja California, a few miles north of Scammons lagoon. Species not found living are marked d.

The letter e indicates species observed in the kitchen middens or shell heaps on the sand dunes near the lagoon, probably of Indian origin—but possibly in part of more recent origin; species marked ee were probably collected attached to other shells and not sought for food; Pinna and Avicula were doubtless sought by pearl fishers.

In one of these heaps was found a stone cylinder, perforated, undoubtedly of Indian origin, which was sent to the American museum of natural history, with several thousand other specimens on approval in exchange for books—which they now refuse to send and likewise refuse to return the specimens—compelling us to make a forced donation, a species of wholesale robbery, founded originally we suspect on a misunderstanding, but so far the museum officers concerned have shown no trace of honor.

Purpura biserialis Blainv.

Found living a few miles north of San Diego was seen only in beach worn specimens; observed abundant at San Juan and other points in the Gulf of California.

Chorus belcheri Hinds. d

Ranella californica Hinds. d abundant.

Macron æthiops Reeve. Not rare. e

Nassa tegula Reeve. Abundant.

Myurella simplex Cpr. Not rare.

Drillia——? d ee

Conus californicus Hnds. d ee

Cypræa spadicea Gray.

Several fine examples were collected by the pearl fishers who were in the lagoon at the time of my visit.

Neverita reclusiana Reeve.

Apparently as abundant as formerly in San Diego bay. e

Polynices uber Valenciennes. One living specimen found.
Crucibulum spinosum Sowerby. Abundant. ee
C. imbricatum Lam. Orcutt No. 1751. d ee
Crepidula unguiformis Lamarck. One collected.
C. dorsata Brod. Found on shells collected by the pearl divers.
C. rugosa Nuttall. Abundant. ee
Litorina scutulata Gould. Abundant.
L. planaxis Nuttall. d rare.
Cerithidea sacrata Gould. ? d rare.
Barleeia subtenuis Cpr. Extremely abundant on sea-grass.
Truncatella californica Pfeiffer. Not rare.
T stimpsoni Stearns. Very common.
Pomaulax undosus Wood. d e common.
Omphalius aureotinctus Forbes. One seen, d.
Haliotis cracherodii Leach.

To the north of Lagoon Head, at 'Santa Rosalia,' on the west coast, hundred of sacks of this species were loaded on the steamer during my trip. e

H. splendens Reeve

The pearl fishers had only two or three.

H. corrugata Gray.

The pearl fishers had collected about two dozen fine typical shells of this species.

Fissurella volcano Reeve. d
F. violacea, one specimen, d.
Lucapina crenulata Sowerby. e
Acmæa patina Esch. Rare.
A. spectrum Nuttall. Few small ones seen.
Lottia gigantea Gray. e common.
Cylichna inculta Gould. d
Bulla nebulosa Gould. Not rare.
Haminea vesicula Gould. Abundant.
H. virescens Sowerby. d abundant.
Melampus olivaceus Carpenter. d ee abundant.
Pedipes unisulcata Carpenter. Abundant.
Zirphœa crispata L. d
Pholas——? d
Solen rosaceus Gould. Beautiful and large, $2\frac{3}{4}$ inches long.
Tagelus californianus Conrad. Abundant.

Cryptomya californica Conr. d
Clidiophora punctata Gabb. d one specimen.
Semele decisa Conr. d
Lyonsia californica Conr. d common.
Periploma argentaria Conr. d
Sanguinolaria nuttallii Conr. A fine series obtained.
Tellina rubescens Hanl. One fine specimen obtained.
T. variegata Cpr. d not rare.
Heterodonax bimaculatus D'Orb. d common.
Macoma indentata Cpr. Abundant.
Donax californicus Conr. d common.
D. flexuosus Gould. Few fine ones obtained.
Venus fluctifraga Sowerby. One distorted specimen. e
V. succincta Val. Large and abundant. e
Tivela crassatelloides Conr. d not abundant?
T. radiata Sowerby. Not common?
Amiantis callosa Conr. Abundant. d
Cytherea chionæa Mke. e edible, not abundant.
Tapes staminea Conr. d
Cardium procerum Sby.
Liocardium elatum Sby.
L. substriatum Conr.
Chama exogyra Conr. d
Arca multicostata Sby. e not rare, edible.
Mytilus californianus Conr. d e
Modiola capax Conr. d
Septifer bifurcatus Reeve.
Pinna lanceolata Sby. d e
Avicula peruviana Reeve. Found abundant by pearl fishers. e
Pecten subnodosus Sby. d e
P. monotimeris Conr. d rare.
P. æquisulcatus Conr. e extremely abundant.
Anomia lampe Gray.

Thousands of find specimens were found, attached to each other, or to other shells, bits of wreckage, etc. Found also at Guaymas, in the Gulf.

Ostrea lurida Cpr. ee common.
Labiosa (Ræta) undulata Gould. d
Dosinia ponderosa Gray. e edible, common.

To be concluded.

SUPPLEMENT (not for preservation).

QUERIES AND ANSWERS.

W G Watkins—Your ferns are
1—Adiantum pedatum L.——Maiden Hair fern.
2—Aspidium nevadense Eaton.
3—Lomaria spicant Desvaux.

EDITORIAL.

The editor's illness has abbreviated and delayed this issue but we propose to give our readers a yearly average of not less than 16 pages a month.

NOTES AND NEWS.

It should be noted that Epiphragmophora Harperi was named in honor of Prof. George W. Harper, for nearly half a century devoted to educational work in Cincinnati, and until lately principal of Woodward High School—having resigned that position to devote his time more fully to scientific research; geology and conchology are his specialties.

Epiphragmophora Bowersi was named in honor of Dr. Stephen A. Bowers, a veteran in scientific and other good work on the Pacific coast, now state mine examiner for California.

Mrs. Olive L. Eddy Orcutt M. D. has opened an office for the practice of medicine at 365 21st St., San Diego.

AUTHOR'S CATALOG.

Stone, Alaric: My summer with some chipmunks. Ladies home journal, Philadelphia, for Ag is a pleasing nature study.

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